

# Wave Baffles

## ACOUSTICAL CEILING BAFFLES

WAVE BAFFLES PROVIDE A COST EFFECTIVE METHOD FOR REDUCING REVERBERATION IN LARGER SPACES WITH HIGH CEILINGS. IMPROVED ACOUSTICS AND NOISE REDUCTION IN GYMNASIUMS, ARENAS, NATATORIUMS, MULTI-PURPOSE AND OTHER LARGE SPACES IS ACHIEVED UTILIZING WAVE BAFFLES.

**Wave Baffles** are designed for horizontal suspension in a wave-like form at the ceiling level. This provides high levels of sound absorption for reducing reverberation in large, high cubic volume rooms. As an option, the baffle can be finish faced on both sides and hung vertically as an acoustical banner.

The Wave Baffle is produced in custom sizes with suspension hardware that can be engineered to create the desired amount of vertical drop between suspension points. The typical vertical drop at the mid-point of the baffle is 6" or greater. A variety of finishes are available for baffles up to 48" wide and 30' long.

**Two types of Wave Baffles are available:**

- **Type SE:** Sewn Edges with sailcloth or other fabric facing
- **Type HB:** Heat Bonded vinyl encapsulates the fiberglass blanket

Both types may be suspended as horizontal clouds or vertical baffles.

KINETICS Noise Control®

# **Wave Baffles** / Acoustical Ceiling Baffles

## DESCRIPTION

A fiberglass blanket is encapsulated in a sewn sailcloth fabric with a woven scrim backer (Type SE) or a heat sealed vinyl covering on both sides (Type HB). Grommet or suspension hardware is located at the perimeter as required.

## FIRE TEST DATA

All components meet the Class A rating as tested by ASTM E 84 or the minimum requirements of flame resistance established by the California Fire Marshal per Section 13115 of the California Health and Safety Code.

## COMPOSITION

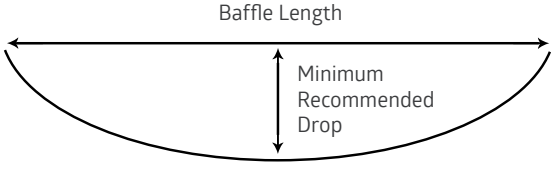
Type SE Wave Baffles utilize a sailcloth (nylon) or a Guilford fabric facing on the exposed side and edges of the baffle. The facing is sewn at the perimeter into the fiberglass blanket and woven scrim backer. For vertically hung baffles, the sailcloth facing can be applied on both sides. Attachment hardware is typically grommets built into the baffle. Type SE baffles provide greater durability.

Type HB Wave Baffles utilize a vinyl covering that fully encapsulates the fiberglass blanket with all edges heat sealed.** Type HB baffles are the most economical. Optional perforated vinyl available.

## MINIMUM DROP REQUIREMENT

Kinetics Noise Control recommends that the middle of the Wave Baffle be allowed to drop at least the minimum distance as described in the following table. There is no limit to the maximum drop allowed.

| Baffle Length (ft) | 10 | 15 | 20 | 25 | 30 |
|---|---|---|---|---|---|
| Minimum Drop (in) | 3 | 6 | 12 | 18 | 24 |




## APPLICATIONS

- Larger spaces with high ceilings that require reduced reverberation
- Gymnasiums
- Natatoriums*
- Arenas
- Multi-Purpose Rooms

## ACOUSTICAL PERFORMANCE

Tested per ASTM C423-90a in a suspended position similar to a typical installation:

| Frequency (Hz) | 125 | 250 | 500 | 1K | 2K | 4K |
|---|---|---|---|---|---|---|
| Type SE | 0.46 | 0.80 | 1.26 | 1.47 | 1.27 | 1.05 |
| Type HB | 0.41 | 0.64 | 1.00 | 1.33 | 0.64 | 0.29 |
| Type HB (perfed) | 0.51 | 0.56 | 0.93 | 1.12 | 1.08 | 0.88 |

Sound Absorption in Sabins per square foot

SE is sailcloth with sewn edges. HB is heat bonded vinyl (solid). Vinyl can be perforated to improve high frequency absorption.

**Designers:** Wave Baffles are tested in a Type J mounting that replicates a standard horizontally draped installation. A Type E400 mounting (used by others) is not recommended for testing because the baffles are framed in on all sides producing misleading absorption coefficients for typical installations.

***Note:** For Type SE baffles, stainless steel grommets (optional) are recommended in pool areas.

****Note:** Type HB baffles may show wrinkling on the face when hung. This is normal and an inherit vinyl property. Consider Type SE for smoothest possible finish.